**DSA LAB**

**Lab Assignment number 16**

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**AIM:** To implement Binary Search

**ALGORITHM:**

Step 1: READ n and elements of list

Step 2: [INITIALIZE] first = 0

Step 3: [INITIALIZE] last = n - 1

Step 4: [INITIALIZE] middle = (first+last)/2

Step 5:Repeat the following while first <= last

IF array[middle] < search

SET first = middle + 1

ELSE IF array[middle] == search

PRINT “Found”

break

ELSE

SET last = middle - 1

SET middle = (first + last)/2

Step 6: IF first > last

PRINT "Not found”

Step 7:EXIT

**EXAMPLE:**

array[5] = { 11, 12,13,14,15}

Search : 14

Stage 0 :

First :0

Last :4

Middle : 2

Search > array[middle]

Stage 1:

First : 3

Last :4

Middle : 3

Search found at location 3